

Title (en)

Multi-channel hearing instrument with inter-channel communication

Title (de)

Mehrkanal Hörgerät mit Übertragungsmöglichkeiten zwischen den Kanälen

Title (fr)

Prothèse auditive multicanaux avec communication entre les canaux

Publication

EP 1251715 A2 20021023 (EN)

Application

EP 02008747 A 20020418

Priority

US 28445901 P 20010418

Abstract (en)

A multi-channel digital hearing instrument is provided that includes a microphone, an analog-to-digital (A/D) converter, a sound processor, a digital-to-analog (D/A) converter and a speaker. The microphone receives an acoustical signal and generates an analog audio signal. The A/D converter converts the analog audio signal into a digital audio signal. The sound processor includes channel processing circuitry that filters the digital audio signal into a plurality of frequency band-limited audio signals and that provides an automatic gain control function that permits quieter sounds to be amplified at a higher gain than louder sounds and may be configured to the dynamic hearing range of a particular hearing instrument user. The D/A converter converts the output from the sound processor into an analog audio output signal. The speaker converts the analog audio output signal into an acoustical output signal that is directed into the ear canal of the hearing instrument user. <IMAGE> <IMAGE>

IPC 1-7

H04R 25/00; **H03G 3/20**

IPC 8 full level

H04R 25/00 (2006.01)

CPC (source: EP US)

H04R 25/356 (2013.01 - EP US); **H04R 25/407** (2013.01 - EP US); **H04R 25/453** (2013.01 - EP US); **H04R 25/505** (2013.01 - EP US); **H04R 2225/43** (2013.01 - EP US)

Cited by

WO2008057173A1; EP3089364A1; EP1827058A1; EP2629550A3; CN102812636A; CN104242853A; EP2632044A1; EP2615736A4; US10396743B2; US10993027B2; US9584081B2; US9124963B2; US8319088B1; WO2011115944A1; WO2012052987A1; US8121323B2; US9762198B2; US9083298B2; US9419577B2; US9935599B2; US10256785B2; US10680569B2; JP2010508758A; JP2012239196A; US9705461B1; US9954506B2; US9960743B2; US9966916B2; US9979366B2; US10361671B2; US10374565B2; US10389319B2; US10389321B2; US10389320B2; US10396739B2; US10396738B2; US10411668B2; US10454439B2; US10476459B2; US10720898B2; US11296668B2; US9685924B2; US9698744B1; US9742372B2; US9762196B2; US9768749B2; US9768750B2; US9774309B2; US9780751B2; US9787268B2; US9787269B2; US9866191B2; US10103700B2; US10284159B2; US10523169B2; US10833644B2; US11362631B2; US11711060B2; US11962279B2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1251715 A2 20021023; **EP 1251715 A3 20040211**; **EP 1251715 B1 20060215**; **EP 1251715 B2 20101201**; AT E318062 T1 20060315; CA 2382362 A1 20021018; CA 2382362 C 20090623; DE 60209161 D1 20060420; DE 60209161 T2 20061005; DK 1251715 T3 20060619; DK 1251715 T4 20110110; ES 2258575 T3 20060901; US 2003012392 A1 20030116; US 2007127752 A1 20070607; US 7181034 B2 20070220; US 8121323 B2 20120221

DOCDB simple family (application)

EP 02008747 A 20020418; AT 02008747 T 20020418; CA 2382362 A 20020418; DE 60209161 T 20020418; DK 02008747 T 20020418; ES 02008747 T 20020418; US 12518402 A 20020418; US 65667807 A 20070123